Methylene Blue (Aqu) 1%

Intended use
Methylene Blue (Aqu) 1% w/v is used as general-purpose biological stain and capsule staining.

Summary
Methylene Blue was earlier recognized as a good nuclear stain, the staining solutions are always either aged or alkalized, if not both. More importantly it is an excellent stain for ribonucleic acid, which is the important stainable constituent of bacterial bodies, of lymphocyte and hemoprotoal cytoplasm, and of nerve cell tigroid granules.

Principle
Capsules are composed of mucoid polysachharides of polypeptides. These are detected by capsule staining. The main purpose of capsule stain is to distinguish capsular material from the bacterial cell. The capsule stain is a differential stain used to detect cells capable of producing an extra cellular capsule. The capsule stain begins as a negative stain. Cells are spread in a film of the acidic stain and are not heat-fixed. Heat-fixing causes shrinkage of the cells, leaving an artifactual white halo around them that might be falsely interpreted as a capsule. Capsules appear colourless with stained cells against a dark background.

Reagent / Contents

Methylene Blue	1%
Water	99%

Appearance
Dark blue coloured solution.

Storage and Stability
Store the Methylene Blue (Aqu) 1% at room temperature 15°C-25°C, away from light. Stability of the Methylene Blue (Aqu) 1% is as per the expiry date mentioned on the label.

Materials required but not provided
Clean grease-free glass slide, loops, staining rack, blotting paper, immersion oil , 0.5%. Aqu. Safranin, microscope.

Type of Specimen
Any isolated colony on primary or sub-cultured plates can be isolated from the following specimens.
Clinical specimen: Blood, urine, CSF, pus, wounds, lesions, body tissues, sputum etc.
From environment: Air, water, soil, sludge, wastewater, food, dairy samples.

Procedure
1. Capsule Staining
2. Take a drop of Methylene Blue Stain on a clean dry slide.
3. Add sample to the drop & mix with the help of loop.
4. Using another slide make a thin smear.
5. Air dry the slide and observe under oil immersion objective.
6. Simple Staining for Bacteria / tissue cells
7. Prepare smear on a clean glass slide, air dry and heat fix.
8. Flood the slide with aqueous methylene blue stain and keep for 2-3 minutes.
9. Wash the slide with running tap water.
10. Counter stain with 0.5% aqu. Safranin/ Schaeffer & Fulton's Spore stain B for 30 seconds (only for bacteria).
11. Blot air dry and observe under oil immersion objective.

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Results

A. Background- Bluish and Capsule- Colourless (Hollow bodies).
B. Background-Colourless and Bacterial cells- Blue / counter stained as pink coloured.
C. Tissue Cells- Blue coloured.

Warranty

This product is designed to perform as described on the label and pack insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Data on file: UltraCare Diagnostics.

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.

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